

ACETONITRILE

0088

March 2002

CAS No: 75-05-8
 RTECS No: AL7700000
 UN No: 1648
 EC No: 608-001-00-3

Methyl cyanide
 Cyanomethane
 Ethanenitrile
 Methanecarbonitrile
 C_2H_3N / CH_3CN
 Molecular mass: 41.0

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
FIRE	Highly flammable. Gives off irritating or toxic fumes (or gases) in a fire.	NO open flames, NO sparks, and NO smoking. NO contact with oxidants.	Alcohol-resistant foam, dry powder, carbon dioxide.
EXPLOSION	Vapour/air mixtures are explosive. Risk of fire and explosion on contact with oxidants.	Closed system, ventilation, explosion-proof electrical equipment and lighting. Do NOT use compressed air for filling, discharging, or handling.	In case of fire: keep drums, etc., cool by spraying with water.

EXPOSURE		STRICT HYGIENE!	IN ALL CASES CONSULT A DOCTOR!
Inhalation	Sore throat. Weakness. Abdominal pain. Laboured breathing. Convulsions. Unconsciousness. Vomiting. Symptoms may be delayed (see Notes).	Ventilation, local exhaust, or breathing protection.	Fresh air, rest. Artificial respiration may be needed. Refer for medical attention.
Skin	Redness.	Protective gloves.	Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention.
Eyes	Redness. Pain.	Face shield or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Ingestion	(See Inhalation).	Do not eat, drink, or smoke during work.	Rinse mouth. Induce vomiting (ONLY IN CONSCIOUS PERSONS!). Give plenty of water to drink. Refer for medical attention.

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Ventilation. Remove all ignition sources. Collect leaking liquid in sealable containers. Absorb remaining liquid in dry sand or inert absorbent and remove to safe place. Do NOT wash away into sewer. Personal protection: complete protective clothing including self-contained breathing apparatus.	F Symbol Xn Symbol R: 11-20/21/22-36 S: (1/2-)16-36/37 UN Hazard Class: 3 UN Pack Group: II

EMERGENCY RESPONSE	SAFE STORAGE
Transport Emergency Card: TEC (R)-30S1648 NFPA Code: H 2; F 3; R 0	Fireproof. Separated from acids, bases and oxidants. Cool. Well closed.

IMPORTANT DATA

Physical State; Appearance

COLOURLESS LIQUID, WITH CHARACTERISTIC ODOUR.

Physical dangers

The vapour mixes well with air, explosive mixtures are easily formed.

Chemical dangers

The substance decomposes on burning producing toxic fumes including hydrogen cyanide and nitrogen oxides. Reacts with aqueous acids and bases producing toxic fumes. Reacts with strong oxidants causing fire and explosion hazard. Attacks some forms of plastic, rubber and coatings.

Occupational exposure limits

TLV: 20 ppm as TWA; (skin); A4 (not classifiable as a human carcinogen); (ACGIH 2004).
MAK: 20 ppm, 34 mg/m³; Peak limitation category: II(2); skin absorption (H); Pregnancy risk group: C; (DFG 2004).

Routes of exposure

The substance can be absorbed into the body by inhalation of its vapour, through the skin and by ingestion.

Inhalation risk

A harmful contamination of the air can be reached rather quickly on evaporation of this substance at 20/C.

Effects of short-term exposure

The substance is irritating to the eyes, the skin and the respiratory tract. The substance may cause effects on the cellular respiration (inhibition), resulting in convulsions and respiratory failure. Exposure far above the OEL may result in death. The effects may be delayed. Medical observation is indicated.

PHYSICAL PROPERTIES

Boiling point: 82/C

Melting point: -46/C

Relative density (water = 1): 0.8

Solubility in water: miscible

Vapour pressure, kPa at 20/C: 9.7

Relative vapour density (air = 1): 1.4

Relative density of the vapour/air-mixture at 20/C (air = 1): 1.04

Flash point: 12.8/C c.c.

Auto-ignition temperature: 524/C

Explosive limits, vol% in air: 3.0-16

Octanol/water partition coefficient as log Pow: -0.3

ENVIRONMENTAL DATA

NOTES

The symptoms of acute intoxication do not become manifest until after a few hours. Specific treatment is necessary in case of poisoning with this substance; the appropriate means with instructions must be available. Card has been partly updated in April 2005. See section Occupational Exposure Limits.

ADDITIONAL INFORMATION

LEGAL NOTICE

Neither the EC nor the IPCS nor any person acting on behalf of the EC or the IPCS is responsible